

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-108230

(43)Date of publication of application : 28.04.1997

(51)Int.Cl.

A61B 17/16

(21)Application number : 07-272938

(71)Applicant : OLYMPUS OPTICAL CO LTD

(22)Date of filing : 20.10.1995

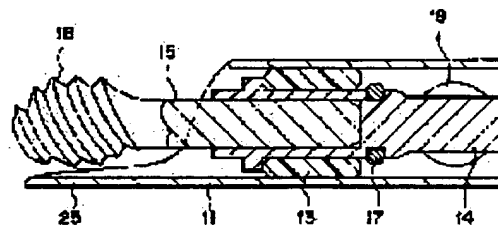
(72)Inventor : OGAWA MOTOTSUGU

## (54) SURGICAL INSTRUMENT

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a surgical instrument which prevents rotation resistance of a bearing part in the handle part from increasing even in the case of being used for a long time and is used without deterioration of a rubber seal member.

**SOLUTION:** A base end of a frictional cut probe for performing a surgical treatment is detachably coupled with a hand piece incorporating a DC motor which drives rotatably, the frictional cut probe has a cylindrical outer tube 11 and a rotary shaft 14 which is stored in the outer tube 11 and rotatably driven, and a frictional cut element 15 is fixed to the tip of the rotary shaft 14. A resin ring 13 formed from fluororesin of small friction coefficient is fitted around the outer circumferential face of the tip of the rotary shaft 14 and rotatably receives the tip side of the rotary shaft 14 in relation to the metal outer tube 11, and prevents metal powder from produced even in the case of abrasion of the bearing so as to prevent increase in rotation resistance, etc.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2000 Japanese Patent Office